

An Essay
on
Hæmoptysis; Propos'd March 4

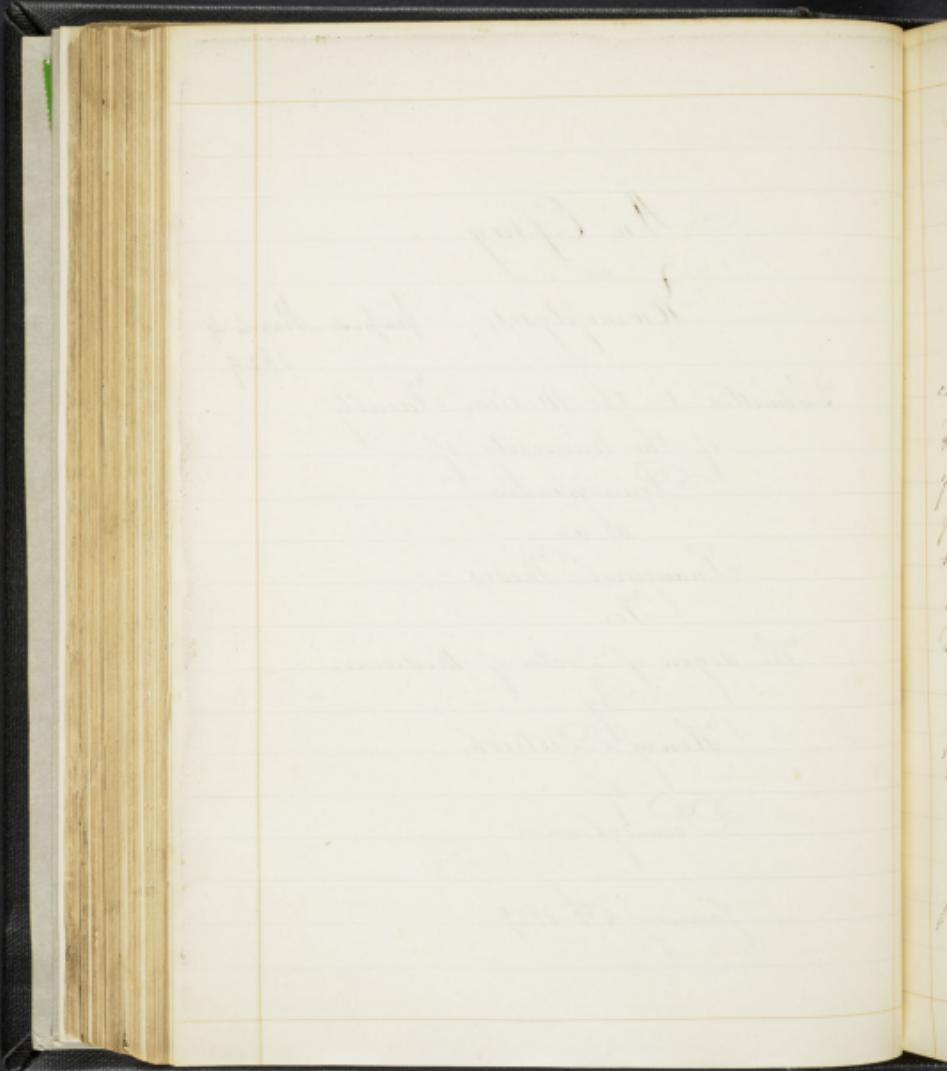
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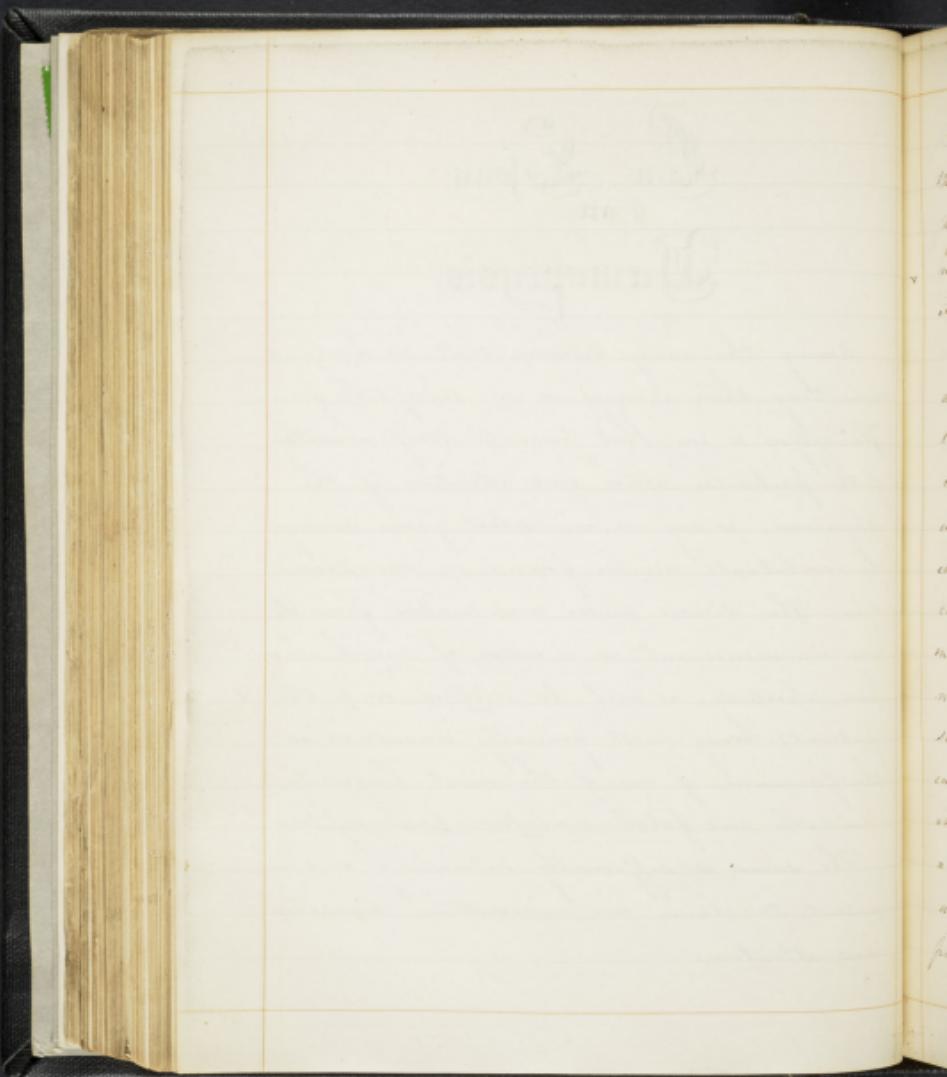


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Au Essay
an
Emphytisis.

Among the many diseases that we daily see committing their ravages on our susceptible frames, Hæmoptysis is one, that presents itself as worthy of the particular notice and attention of the physician; as any we can select from among the exorbitant number found in our Nosology. The disease under consideration, from its very commencement, is a cause of much alarm and solicitude, as well to relatives as to the patient, being most generally considered as the precursor of one of the most lingering, incurable and fatal maladies Consumption.

The disease is sufficiently interesting and important, to claim our unceasing researches and attention.



Though no original light may be shed upon the subject, from this impromptu pen; it is hoped that the matter may ultimately prove not altogether unworthy of the object, for which it is designed.

Hemoptysis, or a spitting of blood, is generally accompanied by a determination of blood to the lungs, known by the name of local congestion. The attacks are always preceded by a titillation in the region of the trachea, larynx or bronchia, according as the ~~con-~~ congestion may happen to be located in the one or the other of these parts; there is also more or less irritation and heat under the sternum, frequently a sallid taste is perceived in the mouth, a sense of weight and fulness about the chest, increased on full inspiration, a dry tickling cough, and sometimes a slight difficulty of breathing. The attack is also preceded by symptoms of fever, flushed face,



pains in the back and loins, lassitude, etc., etc., & frequently, say then, a full and sometimes hard pulse; the pulse in some instances is feeble and indistinct, so as to be scarcely perceptible.

These symptoms are subject to considerable variation; for the attack will sometimes be preceded by nothing more than a slight degree of irritation felt under the top of the sternum, or at the larynx; to relieve this a hawking is made, which brings up a quantity of fothy, red, serpentine coloured blood. The irritation gradually returns, and in like manner more blood is at length brought up, of the same colour as the preceding, accompanied by more or less noise in the windpipe; this is produced by the passage of air through the blood and sputa accumulated in the bronchia or trachia. The quantity of blood brought up is various; a slight degree of the expectoration is sufficient to characterize the disease, as it shuns the haemorrhage.



tendency; and may be quickly succeeded by a much greater quantity. In some instances the bleeding is so profuse, that the blood will be discharged, as though it were in one continual stream from the mouth, and occasion a alarm for the immediate safety of the unfortunate sufferer. It is but rarely in such quantity as either by its extent, or by its suddenly threatening suffocation, to prove immediately fatal.

The bleeding will sometimes cease spontaneously, especially when the attack has been but slight; when it repeatedly occurs, and continues to do so for several days together, it will seldom or never cease permanently, without the interposition of remedial agents, the slightest exertion being sufficient to produce an attack. The colour of the blood discharged is various, so is also its consistence, being sometimes of a fluid red colour, and then, at other times it is of a dark or black

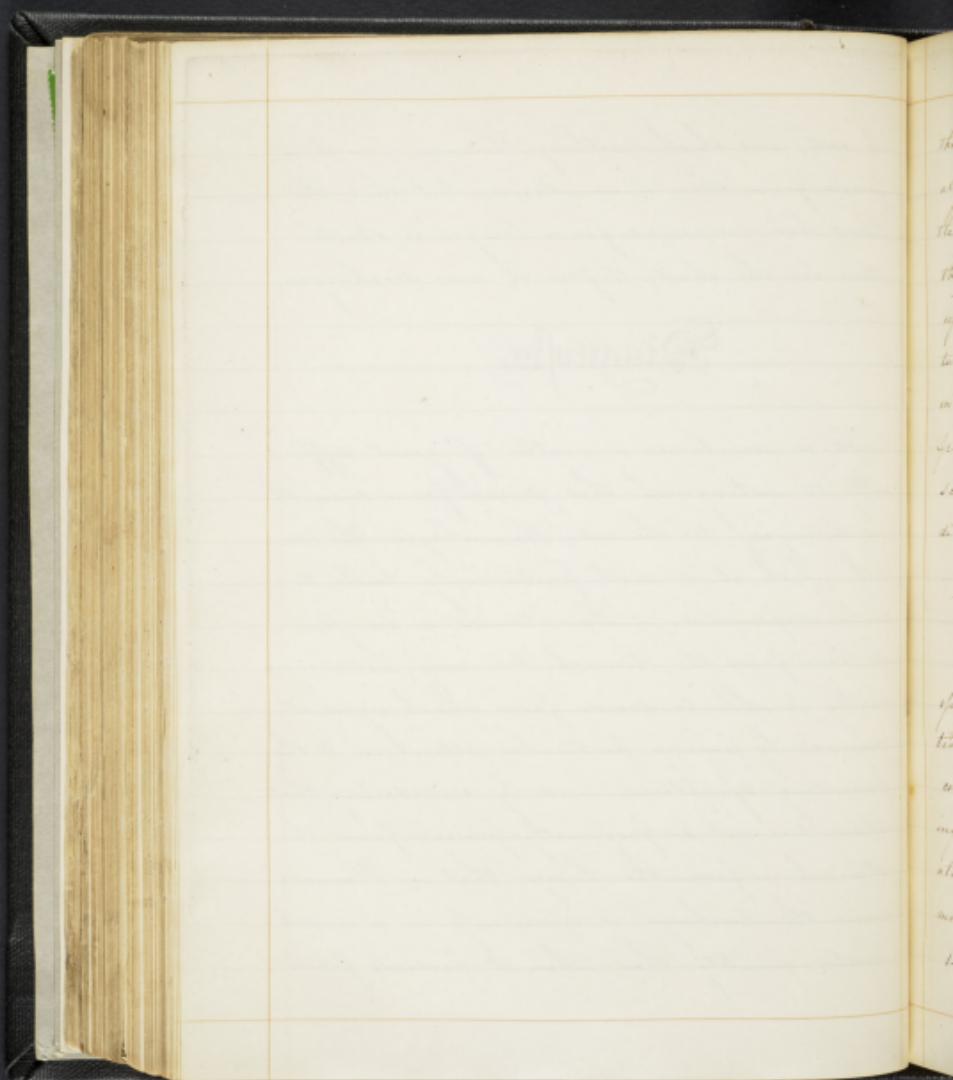


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ish east, and thick; nothing, however, can be inferred from these circumstances, but that the blood has remained for a longer or shorter time in the chest, before it was discharged.

Diagnosis.

It is sometimes a matter of great difficulty to distinguish this disease from some others, belonging to the class Hemorrhagia. The one with which it is most particularly liable to be confounded, is Hamatemesis, or an issue of blood from the stomach. We may, however, generally be able to decide from which organ it proceeds, by paying particular attention to the preceding symptoms; and by considering that blood does not so frequently proceed from the stomach as from the lungs; that in Hamatemesis the discharge is commonly in a much greater quantity, than when it proceeds from



the lungs; that in Hæmoptysis the blood is usually of a florid colour and mixed with a little sputa only, while that thrown up from the stomach is of a darker colour, thrown up by vomiting, and betrays an intermixture of food. It can scarcely be confounded with Epistaxis; if the blood should proceed from the fauces, we can readily satisfy ourselves by inspection, which will show the distillation of blood, if it comes from thence.

Predisposing and Exciting Causes.

The predisposing and exciting causes of hæmoptysis have given considerable room for speculation, and have formed the most important considerations connected with the subject; pointing out in a great measure, the probable termination of the disease, and much of the general mode of treatment.

1. General plethora may be considered as a pre-



susposing cause; especially when we reflect how numerous the vessels of the lungs are, with what a delicate membrane they are covered; situated in a loose cellular tissue; the vessels being of the largest size as they arise from the heart immediately dividing and sub-dividing into the minutest terminations; how readily the vessels become loaded with blood, from either a local or general fulness and increased action of the heart and arteries. From these considerations we may easily understand, why an haemoptysis may sometimes occur, though unquestionably it is of rare occurrence under this particular condition, unless connected with external violence.

2. The suppurative diathesis may be considered as the second predisposing cause of haemoptysis. It is characterized by a general delicacy of structure throughout the body - light and thin hair, a smooth and soft skin, a lax muscular

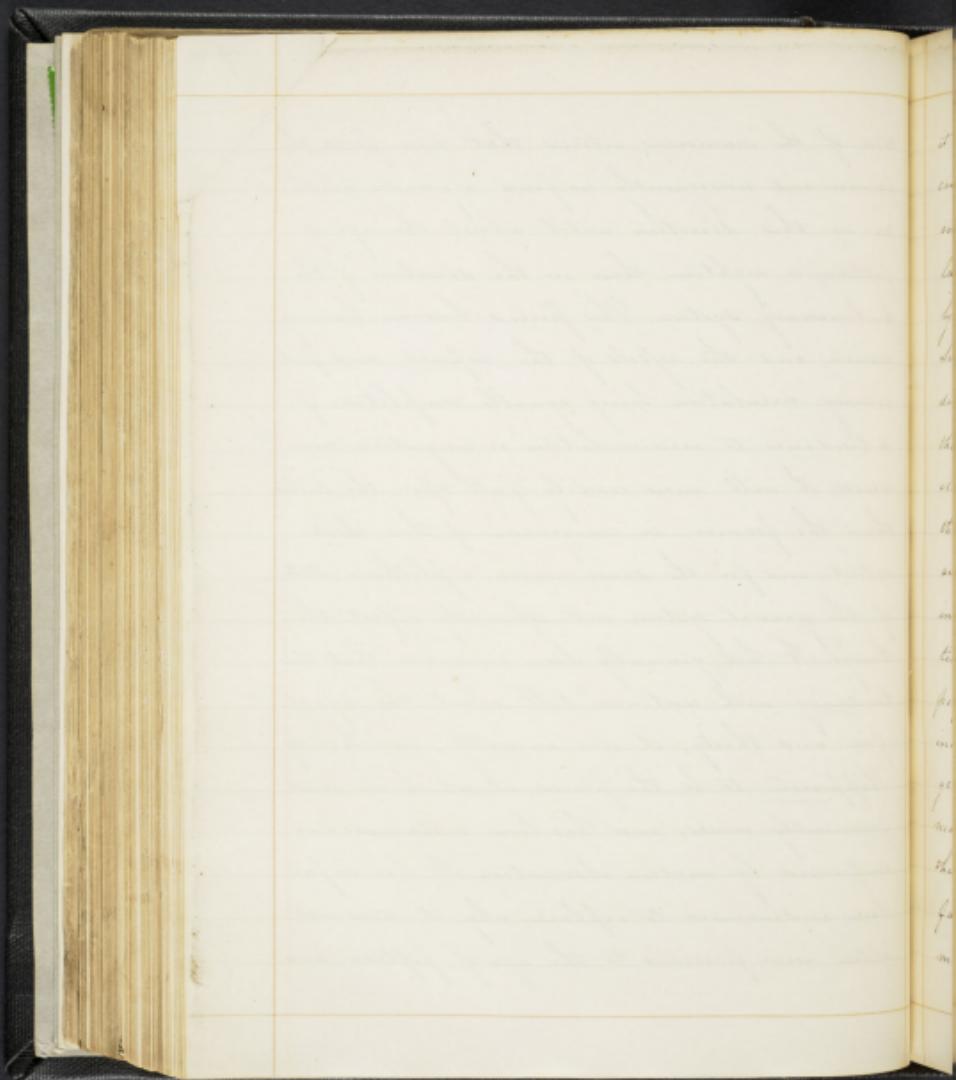


fibre and slender form; that the blood expels
partake of this general delicacy of structure,
there remains but little doubt, and those of
the lungs in particular, for we have already
seen how delicate they are in their natural
state, and consequently, we have every reason
to presume them more disposed to a haem-
atogic disposition, when influenced by this par-
ticular diathesis.

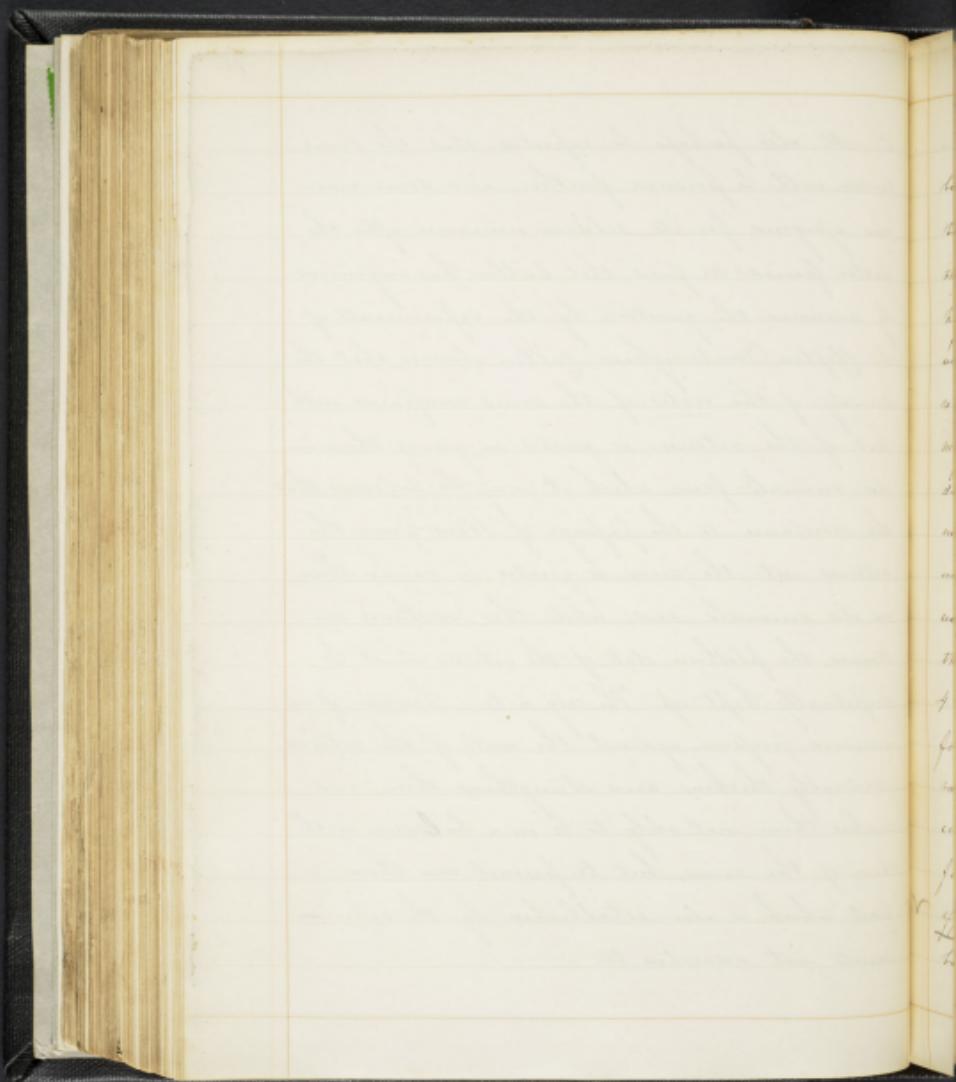
3. The third predisposing cause which we have
to consider, is the period of life in which haem-
optysis usually occurs. Haemoptysis generally now
takes place until the animal frame has man-
ly acquired its full growth, and the vascular
system is proportionally developed. Antecedently
to this period we find the impetus and deli-
cimation of blood, more expended in the aorta
and its extreme ramifications, than in the pul-
monary arteries; because more vital fluid is
required for the propulsive growth and elonga-



tion of the numerous arteries that arise from the former; and consequently we find a greater plethora in this direction until about the age of fifteen or eighteen than in the direction of the pulmonary system. This period however, having arrived, and the vessels of the corporal and pulmonary circulation being equally completed; if a tendency to accumulation or congestion now arises it will more readily fall upon the latter than the former, in consequence of their shorter extent, and for the same reason a plethoric state of the general system will especially affect the lungs. It has generally been conceded that this tendency will continue till about the age of five and thirty; it was sufficiently remarked by Hippocrates to be the period at which it most frequently occurs, and has been sustained and confirmed by modern observation. It has so far been endeavoured to explain, why it does not often occur previous to the age of fifteen; and



it will also perhaps be expected that the same course will be pursued further, and some reasons assigned for its seldom occurrence after the latter period we find that Cullen has ingeniously assumed the question by the experiments of Dr Clifton Wintingham. Cullen observes that the density of the vessels of the veins compared with that of the arteries, is greater in young than in old animals; from which it may be inferred that the resistance to the passage of blood from the arteries into the veins, is greater in young than in old animals; and, while this resistance continues, the plethora state of the arteries must be perpetually kept up. The very action, however, of an increased pressure against the vessels of the arteries gradually thickens and strengthens them, and makes them not only to be in a balance with those of the veins, but to prevail over them; a fact which is also established by the experiments just adduced to.



After this period the constitutional balance becomes completely changed, and the veins become more subject to accumulations than the arteries. The greatest concretions will perhaps be found in the sina portarum, for here we find the motion of the venous blood more retarded than elsewhere. Concretions of this kind may act upon the neighbouring arteries, and induce what may be called a reflex plethora upon them, in consequence of their inability to unload themselves. And hence after this period we meet with more frequent haemorrhage from the abdominal and pelvic organs.

¶ The last predisposition to haemoptysis, is a malformation of the chest; this may proceed from various causes, and is particularly to be observed in persons who in early life have suffered from rickets to such an extent as to affect the spine and ribs; persons who have been thus injured to any considerable extent.



are particularly liable to haemoptysis, when they occur at the period of life designated under the preceding predisposition. The manner in which this malformation acts in producing an attack is very obvious - presenting a free and due expansion of the lungs. In the great number of cases, there is a deficiency in the capacity of the chest, characterized by a narrow thorax and prominent shoulder.

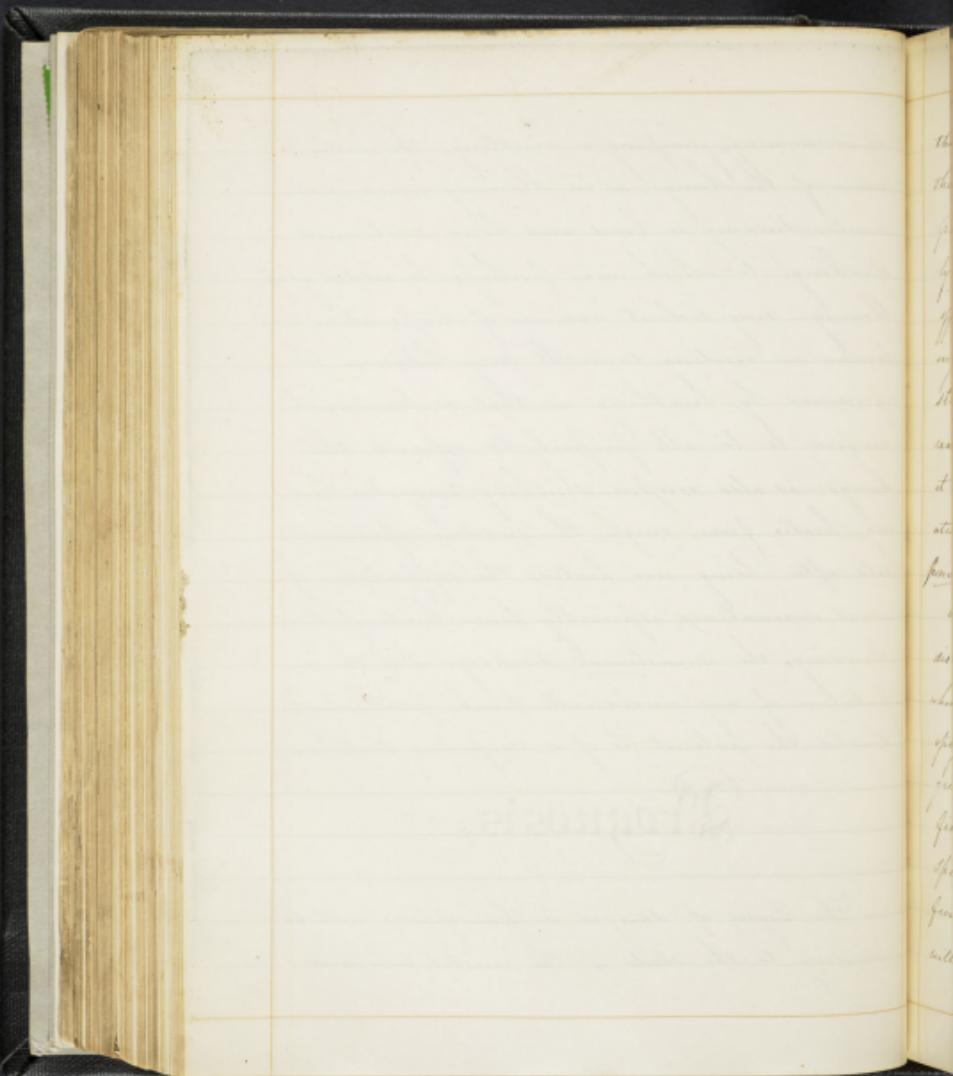
That the predisposing cause is sufficient to produce an attack cannot readily be admitted, however considerable the degree may be; for by tracing all the circumstances that occur antecedent to an attack, we can generally find an occasional or exciting cause. In persons who are thus predisposed an attack may occasionally be produced by exciting causes that will escape our strictest and most accurate inquiries. Among the most important exciting causes are external injuries; immediate exertion of the whole body,



as in running, jumping or wrestling; the undue action of the lungs, as in blowing wind instruments, singing a loud and long continued note, &c; to which may perhaps be added deep breathing - any violent exercise of respiration may become an exciting cause. It may likewise be produced by breathing air that is too much caustic to be able properly to expand the lungs; as also excessive drinking, insular living, hectic fever, cough, the sudden exposure to cold after being over heated; the suppression of usual evacuation, especially hemorrhoids of long standing, the menstrual discharge and the amputation of any considerable limb, particularly should the patient be of a scrophulous diathesis.

Prognosis.

The degree of danger in Paroxysm will be according to the state of the constitution and



the severity of the symptoms, it is very seldom that the bleeding is so profuse as to destroy the patient either by the quantity of blood lost or by suffocation; when it does happen, the blood is effused from a large vessel, the fatality depending upon the size of the ruptured septum. If the structure of the lungs be sound, we have no reason to prognosticate danger; on the contrary, it often proves salutary in obstructive inflammation, and of exudates with sputum in pleurisy, pneumonia and asthma it often acts beneficially.

Our prognostication is very different when the disease is preceded by symptoms of consumption or when the patient is of a slimy, deathless habit; if haemoptysis occurs under these circumstances we have great reason for alarm, and we can have little confidence that the ruptured septum will heal kindly and speedily; on the contrary we have much to fear from fresh jets, and the irritability of the organ will perpetually be kept up by excreta forming

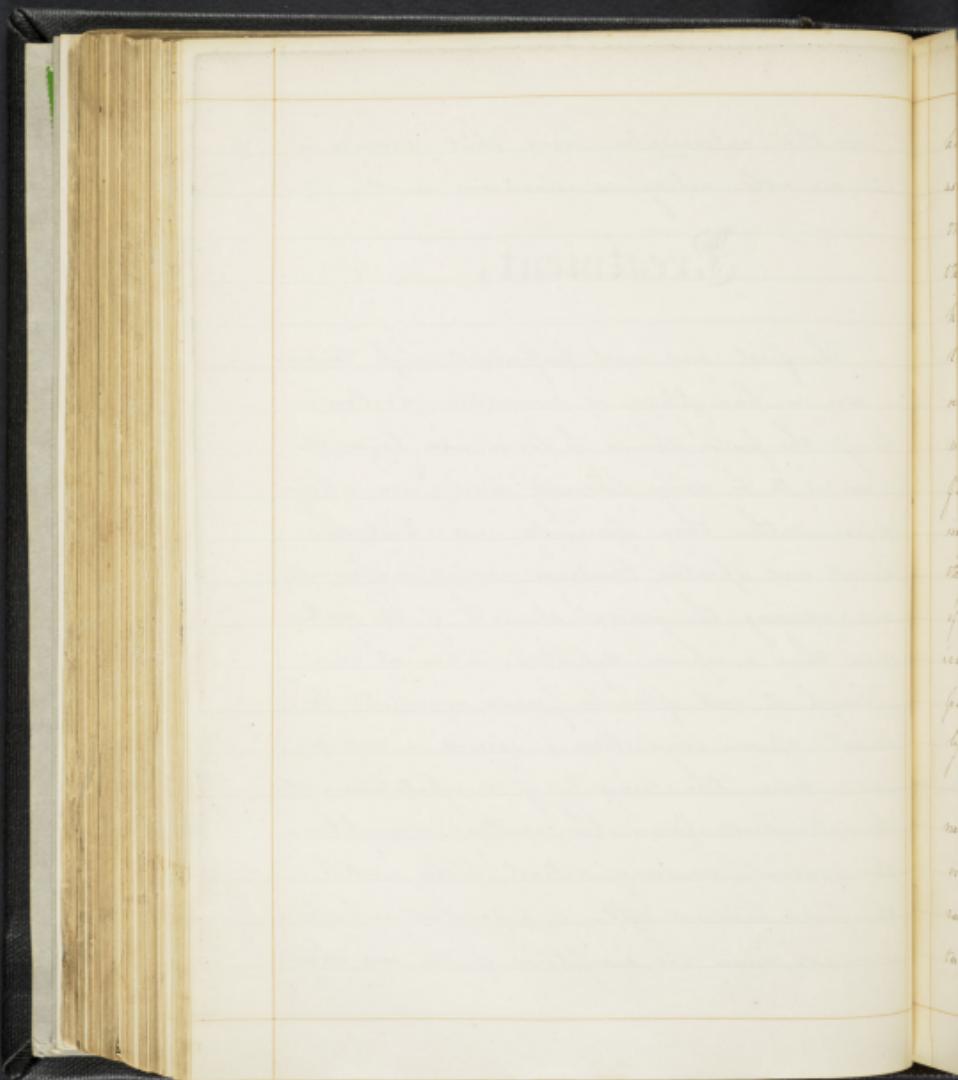


from the extravasated Blood that remains in the air cells, acting as coagulable matter.

Treatment.

The first and most important step towards a cure in haemoptysis, is venesection; particularly if the pulse should be tense and hard, the blood is to be drawn liberally and from a large vein, rather than sparingly and repeatedly. Small and repeated bleedings proving insufficient, and reducing the general strength of the system more than a copious depletion, taken at once.

Though it will often be found expedient to repeat copious venesection a second or even a third time, the necessity of a repetition will be determined from the existing symptoms. In general, we may deplete Blood until the pulse becomes soft - or a decided impression is made upon the symptoms of the case, should



however the circumstances of the case be such, as not to warrant the repetition of bleeding from the arm, as well as in those instances in which the symptoms are perfectly local, or where the haemorrhage occurs in individuals of infected constitutions, says a leech to the anterior part of the tibia, or between the shoulder may be substituted. Leeches may generally be preferred to leeches, as they make a more decided impression on the system; the degree of irritation they produce attracting to the part an efflux of blood, aiding considerably in diminishing the irritation and congestion of the pulmonary capillaries, by which the haemorrhage is principally maintained.

After we have derived full advantage from resuscitation, and the patient continues to expectorate blood, we may derive the most decided advantage from the internal use of the suppository of Dr. Lister. It is perhaps the most powerful



modicum, and one that will seldom disappoint us in our expectations; especially when combined with opium it may be combined in the proportion of a gr. of the latter, to three or four of the former, to be administered every hour or two until the bleeding is checked. The above combination should always be resorted to in a burning and obstinate case; though it should not be indiscriminately used, as it is liable to induce sleep. We may also derive advantage from the administration of Digitalis; the cases to which it is most appropriate are those, where the pulse is very quick and the disease somewhat of a chronic character; it is to these circumstances that it is best adapted, having a sedative influence on the heart and arteries.

In the commencement of the disease, we ought to admit cool air freely; the patient must be placed in an erect position as much as possible; very agitation of the mind must be avoided;



all unnecessary clothing ought to be immediately removed; the more particularly if it has a tendency to impede the free exercise of the functions of the chest and lungs; speaking soft in particular to be avoided, as it is a frequent cause of the recurrence of an attack. Ice-cold acidulated饮水 may be freely administered to quench the thirst, without much fluid being taken. After bleeding we may apply cold water to the thorax and arm pits, or what is perhaps better, cold water and siccous, which is recommended by many respectable writers. The application of cold to the Scrotum is highly recommended. Dr Darrin recommends the sudden sprinkling of the whole body as being often usefull.

Common salt is a remedy peculiar to this form of Paroxysm: the mode of giving it is, to pour down from a tea to a table-spoonful of finely powdered culinary salt, as soon as possible after the Paroxysm begins; and swallow



sing it by degrees, it recommended as useful. It is a familiar and useful remedy in slight cases of the disease.

A saline purgative is to be administered, subsequent to the first Bleeding, as well to relieve the bowels from the irritation of retained feces, as to invite an increased flow of blood towards them, with a view of diminishing the congestion in the lungs. Nothing more than a gentle laxative condition of the bowels is required, active purging being unnecessary. When the system is excited by febrile symptoms, we derive great advantage from the administration of Nitre, combined with minute doses of Tartarized Antimony; it may be used in the proportion of a sixth or eighth of a grain of the latter to six or eight grains of the former; this combination will be found a very useful remedy in this stage of Hemoptysis. Every part of the anti-phlogistic regimen is to be strictly observed. In those cases of Hemoptysis, where the Bleeding



has continued for several days, a feeble and constant pain complained of, a small pulse, and after the free use of the laudanum, aperients &c. The application of a blister on the breast, or on the back in the course of the spine, will frequently arrest the bleeding; the beneficial effects from blistering have often been observed.

Should the patient be much troubled with cough particularly during the night, cocaine may be had to spiate; a full emulsion of a grain or two of opium and one of *Spiraea umbellata* administered in wine to two, will be found of great advantage.

Spiraea umbellata, by itself, is highly recommended by some writers. It is directed to be given in combination with sugar, in the dose of two thirds of a grain every hour. Some physicians have been recommended in the treatment of Hemoptysis, they have sometimes proved successful, though they are not altogether free from danger.

Great attention to regimen should be paid



throughout the disease. The patient ought to be allowed a little tea than lemonade, or barley, rice or grain water, slightly acidulated, taken cold and in moderation. Every thing that has a tendency to increase the haemorrhagic inclination ought to be carefully avoided. By vigorous gentle exercise is to be permitted, such as sailing, or riding in an easy carriage, on smooth roads. The patient is carefully to abstain from all the circumstances, which have been enumerated under the head of exciting causes. The patient is to be nourished by a light vegetable diet. By attention to these particulars, we will generally succeed in preventing a return of the disease.

